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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO.             | CONFIRMATION NO.       |
|---|-------------|------------------------|---------------------------------|------------------------|
| 10/804,700  | 03/19/2004  | Charles Oakley Roberts | 010355-9125                     | 9150                   |
| 23409 7590 06/26/2007<br>MICHAEL BEST & FRIEDRICH, LLP<br>100 E WISCONSIN AVENUE<br>Suite 3300<br>MILWAUKEE, WI 53202 |             |                        | EXAMINER<br>DAVIDSON, DREW ALAN |                        |
|   |             |                        | ART UNIT<br>3709                | PAPER NUMBER           |
|   |             |                        | MAIL DATE<br>06/26/2007         | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/804,700

Applicant(s)

ROBERTS, CHARLES OAKLEY

Examiner

Drew Davidson

Art Unit

3709

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-17 is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/04.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being unpatentable over Gardner et al. (U.S. Patent 4,854,832).

#### Regarding claims 1-4:

Gardner et al. '832 teaches a valve for a gas-driven motor (6:1-3) comprising: a shiftable actuator/spool-valve (item 42 in Fig. 1, 6:26-28) having first and second passages/supply-ports (items 94 and 100 in Fig. 1); first and second diaphragms/power-pistons (items 16 and 18 in Fig. 1); opposed pressure-chambers/motive-gas-chambers (items 12 and 14 in Fig. 1); the shiftable actuator/spool-valve having a large diameter front end/face (item 80 in Fig. 1) with a chamfered valve projection located thereon (as depicted in Fig. 1), and a small diameter rear end/face (item 56 in Fig. 1) with a chamfered valve projection located thereon (as depicted in Fig. 1). The large and small diameter ends/faces taught by Gardner et al. '832 further comprise annular grooves (items 62 and 76 in Fig. 1) having seals (items 64 and 78 in Fig. 1) disposed therein (3:65-4:5).

***Prior Art***

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consists of two patents. Frederick et al. (U.S. Patent 1,599,275) teach a reciprocating valve assembly (Fig. 1) which reads on aspects of the instantly claimed valve assembly. Credle, Jr. (U.S. Patent 4,436,493) teaches a reciprocating valve design (Fig. 4 and 5) which reads on aspects of the instantly claimed valve assembly.

***Allowable Subject Matter***

Claims 5-17 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art of record neither discloses nor makes obvious a valve assembly comprising a shiftable valve for alternately filling and exhausting dual opposed chambers. The shiftable valve having a front face with a valve projection thereon and a rear face with a valve projection thereon, the valve projections being coaxially aligned on the longitudinal axis of the shiftable valve. The valve assembly further comprising a valve block having a chamber with a front end and a rear end disposed around the shiftable valve and being capable of axial movement of the shiftable valve along the longitudinal axis of the shiftable valve, wherein the front face of the shiftable valve is located in the front end of the chamber and the rear face of the shiftable valve is in the rear end of the chamber. The valve block further comprising inner exhaust passages in fluid communication with the front and rear ends of the chamber, outer exhaust passages corresponding to and in fluid communication with each of the inner exhaust passages, and constricted regions between the inner and outer exhaust passages, the

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constricted regions configured to define valve seats into which the valve projections mate, such that upon reciprocating movement of the shiftable valve along the longitudinal axis, the inner exhaust passageways are capable of being alternately opened to their corresponding outer exhaust passageways.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Drew Davidson whose telephone number is (571)270-3290. The examiner can normally be reached on Monday through Friday 8:30 AM through 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571)272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

D.D. D.D. 6/25/07  
June 19, 2007



**MARK EASHOO, PH.D**  
**PRIMARY EXAMINER**

25/ Jun 107